

REMARKS/ARGUMENTS

Claim Amendments

The Applicant has amended no claims. Applicant respectfully submits no new matter has been added. Accordingly, claims 1-14 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

Claim Rejections – 35 U.S.C. § 112

The Examiner objected to Claim 14 under 35 U.S.C. § 112 as failing to comply with the written description requirement. The Applicant respectfully submits that a NAF node is supported in the specification, as indicated by the Examiner. However, the support for the rejection; "a NAF node is not necessarily structurally the same as a processor, a main memory coupled to the processor, or persistent storage" is both correct and not necessarily correct. The language of the preamble indicates "the node having a processor, a main memory coupled to the processor, etc., not the same. The Applicant is not stating that the NAF node is equivalent to a processor, a main memory coupled to the processor, or persistent storage; only, that it includes the aforementioned components. This being the case, the Applicant respectfully requests the allowance of claim 14.

Comments on the Examiner's Claim Interpretation

The Applicant appreciates the detail with which the Examiner is prosecuting the case. However, there is a slight disagreement with the definition of the term "network". The Examiner has indicated that the term "network" in the present application applies to a computer network. As indicated in the title, the abstract and in many instances throughout the application, the Applicant's definition of network applies to a mobile communication network; this is the "network" to which the Applicant's present invention is applied. The mobile communication hardware is depicted in the drawings and the text and various parts of the network include mobile communication hardware (HSS, UTRAN, UE, Sim, etc.), hardware that is not used in a typical computer network.

Claim Rejections – 35 U.S.C. § 103 (a)

Claims 1-8 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nevoux, et al. (US 5,412,726) in view of Asokan, et al. (US 2002/0161723).

The present invention discloses providing an accounting certificate to a user roaming in a visited network so that the user can access services provided by a service provider outside the visited network. The user (subscriber) can buy, and be charged in real time, for goods and services purchased in both the home network as well as in a visiting (roaming) network. If the subscriber doesn't have credit on the account, nothing can be purchased. This check occurs in real time on the network level between home and the visiting network.

The service provider has a connection/relationship with the visited network so that a certificate received from the user can be redeemed by the service provider from the visited network. The operator (the visited network) does not have a relationship with the user's home network, e.g., the home network is in one country and the service provider is in another country. In this case, the user may be able to obtain a certificate from the user's home network, but the certificate might not be accepted by the service provider. Though not discussed at length in the Specification, the service position disclosed in the present invention is essentially an offline service, where a certificate is provided and is good until used. That is, the certificate may be used at some later time, e.g., several days, after it is obtained.

The present invention allows a visited network to generate and issue accounting certificates to roaming users, but the visited network is required to authorize issuance using a standard online charging system (OCS). The service provider does not need to have a billing relationship with the home network, but the home network can still control the issuance of certificates without the demands imposed by having to manage cross-certificates, for instance. As implied by the claim limitations, the service request, authorization, accept or deny message and accounting certificate being sent to the subscriber terminal all happens in real time.

The Examiner indicates that the Applicant's certificate issuing node is the equivalent of Nevoux's SAA. The Applicant respectfully disagrees. There is the CA and

the SAA. SAA is an access system and CA is an authorization center and neither entity in Nevoux issues an accounting certificate. The Applicant respectfully submits that the Nevoux reference fails to disclose the issuance of an accounting certificate and the issuance of an accounting certificate to a subscriber in a visited network.

Also, in paragraph 12c of the Detailed Action, it is indicated that Nevoux discloses *"returning an accept or deny service request message for the accounting certificate to said node based on the subscriber's account data;"* The Applicant respectfully disagrees. The cited passage of Nevoux discusses the "...authentication of the set PA as well as the authentication of the system SAA." The process of determining system and the set is discussed in detail; there is no reference in this passage respective to accepting or denying an accounting certificate based on the subscriber's account data.

The Asokan reference describes the issuance and use of online subscriber authentication, a process that issues digital certificates, but not accounting certificates. Regarding the digital certificate, as stated in paragraph [0010] Asokan discloses; "This method then requests a digital certificate or an address of a signature verification service by the mobile station from the gateway used for authorizing the mobile station to service providers." and, "The user may then request a product, service, access or a right..." and finally, "The service provider then uses the digital certificate to verify the digital signature..." (emphasis added) As claimed by the Applicant, the accounting certificates are issued so that the user/subscriber can pay for a service in real time e.g., in a visited network. The purpose for the Asokan digital certificate is to authenticate or verify the user so that the user can request a service. The Applicant claims issuance of an accounting certificate that can pay for the service. Also, Nevoux does not disclose how authorization/authentication could be provided to a roaming subscriber. In the Nevoux reference it appears that the user would not have access to services where the service provider does not accept certificates issued by the home network.

Individually or in combination the Nevoux and Asokan references fail to disclose the use of accounting certificates to pay for services at least in a visited network. The Applicant contends that Nevoux and Asokan together fail to disclose the above

discussed limitations and respectfully request the allowance of independent claim 1, analogous claim 14 and the respective dependent claims 2-8 and 12.

Claims 9-11 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nevoux, in view of Asokan, and further in view of Puhl (US 6,223,291).

The Puhl reference is cited as disclosing the last element in claim 1, that of sending received accounting certificates to the issuing node for settlement. The Applicant respectfully disagrees. The Puhl reference refers to certificates throughout the patent, this is true. However, Puhl discloses an Attribute Authority that is similar to an account manager (C12, L15-L20). A validation server is included in Puhl that validates certificates for domain members and members that cross-certify are expected to provide servers that obtain and validate certificate chains. (C12, L21-L25). The Attribute Authority provides for License Certificates, Public Key Certificates, Product Certificates, but no accounting certificate. The closest Puhl comes to an accounting certificate is that of the AA instructing a CA to bill a customer for a predetermined fee and the CA instructs the billing computer to add it to the customer's bill (C13, L61 to C14, L1). The Applicant respectfully submits that the Puhl reference does not disclose sending an accounting certificate to a provider to pay for a product or service.

The Applicant's invention avoids the problems with cross-certification, disclosed in Puhl, by providing an online Network Application Function node that facilitates communication with a charging function to approve a user's account and issue an accounting certificate to effect a purchasing step in the visited network.

Claims 9-11 and 13 depend from claim 1 and recite further limitations in combination with the novel elements of claim 1. Therefore, the allowance of claims 9-11 and 13 is respectfully requested.

CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

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